



Office of U.S. Foreign Disaster Assistance

DISASTER CASE REPORT

Agency for
International
Development

Washington D.C.
20523

NIGERIA – Accident (Toxic Waste Incident) FY 1988

Date

August 1987 - June
1988

Location

Koko, Bendel State

No. Dead

0

No. Affected

1,000 people
evacuated

The Disaster

The dumping of hazardous industrial by-products is becoming a serious environmental problem in many Third World countries. One of the most blatant cases of dumping toxic waste occurred in the tiny port town of Koko, in the Bendel State of Nigeria. There, five shiploads of chemical waste were discovered on the property of Mr. Sunday Nana. Mr. Nana, a poor farmer, was paid \$100 a month by Italian businessman Giafranco Raffaelli to store the highly poisonous waste on his property. Mr. Raffaelli, director of Iruekpen Construction Company based in Nigeria, contracted with several European companies to dispose of various toxic industrial by-products and then forged clearance papers and bribed Nigerian port officials to gain entry for the ships carrying the waste. Over 9,000 chemical drums were offloaded at the port at Koko and then taken by truck to Mr. Nana's property, one kilometer away. The illegal dumping began in August 1987 and was not discovered until June 1988, when an Italian newspaper uncovered the story and Nigerian students in Italy alerted the authorities. Mr. Raffaelli quickly departed Nigeria, but 15 people, including several Italian nationals, were arrested in Lagos for their involvement in the dumping scheme. The Nigerian government seized an Italian-owned ship not connected to the waste trade in an effort to pressure the Italian government to admit complicity and pay for the cleanup of the dump site.

Nigerian scientists, along with teams from the United States, United Kingdom, Japan, and the International Atomic Energy Agency, performed assessments of the dumpsite to determine chemical composition and toxicity of 3,800 tons of hazardous waste. The site contained a stew of chemical toxins, including polychlorinated biphenyls (PCBs), a highly carcinogenic byproduct, and various poisons, acids, and flammable liquids. Several drums were labeled with the letter R (the

international symbol for hazardous waste), leading some Nigerian officials to fear that the site also contained radioactive waste. Although no traces of radioactivity were detected by the various teams, the chemical waste posed a serious health threat to the local population. Many of the drums leaked and swelled from the heat and there was a very real risk of a spontaneous fire or explosion engulfing the dump and spreading highly poisonous smoke over a wide area. Local residents ate cassava that was grown in the contaminated soil and some residents reportedly emptied drums and took them home to serve as containers for water or a local gin, known as "kai-kai."

Action Taken by the Federal Republic of Nigeria (FRN)

Upon learning about the toxic waste dump, the FRN immediately declared the area around Koko a disaster area. Approximately 1,000 people were evacuated and soldiers cordoned off the area. A task force was established under the leadership of the FRN's Ministry of Works and Housing. The FRN immediately made an urgent request for international assistance. Teams from the United States, United Kingdom, and Japan met with the FRN Minister of Works and Housing before visiting the site and debriefed the Minister following their assessments. Nigerian scientists from the universities of Ibadan and Lagos also visited the site. The teams presented reports to the Minister, outlining the human and environmental risks of the toxic waste and recommendations for removal and disposal of the chemicals.

Following an agreement between the FRN and the Government of Italy (GOI), a work force of 150 men began to repackage and load the industrial waste into containers to be put on board ships back to Italy. The cleanup began on July 6

and took approximately 21 days. Several of the workers reported experiencing chemical burns or vomiting blood and one man was temporarily paralysed. On July 10, dockworkers temporarily stopped work to protest their exposure to the toxic waste without adequate protection. The last ship left Koko on Aug. 15, and all of the waste was returned to Italy, where it was disposed of in accordance with Italian environmental protection standards.

Assistance Provided by the U.S. Government

On June 15, following a direct appeal from the FRN and a diplomatic note to Secretary of State George Shultz, U.S. Ambassador Princeton Lyman determined that the toxic waste dump at Koko posed a serious environmental risk to Nigeria and, therefore, warranted U.S. governmental aid. OFDA convened a meeting with officials from the U.S. Department of State and the U.S. Environmental Protection Agency (EPA) to discuss the U.S. government response. Three technical specialists from EPA, Captain Ellery Savage, John Gilbert, and Harry Compton, were assembled, briefed, and dispatched to Nigeria to provide technical assistance to the FRN. The EPA technical team was joined by Dr. Jason Weisfeld, a Centers for Disease Control epidemiologist stationed in Kaduna, Nigeria, to perform health surveys on the local population. They began their assessment on June 20 and spent three days examining the site. Team members wore protective suits and used radiation meters and chemical analyzers to measure toxicity. The team found high concentrations of toxic chemicals, but no appreciable levels of radioactivity. They shared the results of their survey with subsequent assessment teams from the United Kingdom and Japan. In its final report to the Minister of Works, the team made a number of recommendations concerning containment of the site and options for disposal of the waste. OFDA paid for the airfare and 14-day per diem of the team members at a cost of \$40,700.

TOTAL \$40,700

Assistance Provided by U.S. Voluntary Agencies

None reported

Assistance Provided by the International Community

Friends of the Earth (U.K.) - sent an environmental assessment team.

International Atomic Energy Agency - dispatched a radiation expert to detect radioactivity.

Italy - sent 2 ships to Koko to transport the waste back to Italy. The GOI paid for the cost of loading the ships and disposal of the waste. The GOI also agreed to decontaminate the site.

Japan - dispatched 2 teams to examine toxicity of the waste.

United Kingdom - sent a team to conduct an environmental assessment of the site and investigate the threat of radioactivity.